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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,926	09/09/2003	Marcus Janke	S&ZIO020201	5142
24131 7590 05/09/2007 LERNER GREENBERG STEMER LLP P O BOX 2480 HOLLYWOOD, FL 33022-2480			EXAMINER PARTHASARATHY, PRAMILA	
			ART UNIT	PAPER NUMBER
			2136	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/657,926	<b>Applicant(s)</b> JANKE, MARCUS	
	<b>Examiner</b> Pramila Parthasarathy	<b>Art Unit</b> 2136	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. This action is in response to remarks filed on February 27, 2007. New Claims 14 – 26 were added. Claims 7 – 9 have been cancelled. Therefore, presently pending claims are 1 – 6 and 10 – 26.

***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Amended and new Claims adds language regarding a processor comprising a computation unit ...wherein the state unit includes an electrical capacitor ... Essentially, the applicant now claims that the processor comprises an electrical capacitor wherein the state is a change state of the electrical capacitor. The specification fails to provide proper antecedent basis for this language.

Claim 26 is objected to because of the following informalities: Claim 26 recites, "Wherein wait clock intervals are introduced to decrease the speed of the calculation unit". Replace "calculation unit" with "computation unit".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1 – 6 and 10 – 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has not pointed out where the new (or amended) claims are supported, nor does there appear to be a written description of the claims' limitations in the application as filed (see above objection to the specification).

***Response to Arguments***

4. Applicant's arguments filed on February 27, 2007 have been fully considered.

Applicant's arguments with respect to Double patenting rejection of amended Claims 1 – 6 and 10 – 26 over US Patent 6,999,333 are not persuasive and Examiner hereby maintains the Double patenting rejection.

Applicant argues that "the concept of operating on programmable memory cells to access the electric characteristics thereof has nothing in common with adjusting the speed of a computation unit". Examiner respectfully points out that the applicant has

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misinterpreting the claim language. Applicant should read the claim as a whole but not just a part of the recitation, in particular, not just one limitation of the claim.

Programmable cell in the patent is equivalent to instant application claimed processor (please refer to the background of the invention, 6,999,333 Patent) and change of state in the instant application is equivalent to the difference in the electrical characteristic quantity (compared with a threshold). Furthermore, programming on a cell is equivalent to the execution of an operation by the computation unit.

Claims of the instant application are anticipated by patent claims in that the patent claims contains all the limitations of the instant application. Claims of the instant application therefore is not patentably distinct from the earlier patent claims and as such are unpatentable for obvious-type double patenting (*In re Goodman (CAFC)* 29 USPQ2d 2010 (12/3/1993).

With respect to amended and new Claims, applicant primarily argues that Curiger (U.S. Patent 6,330,668) does not anticipate "an electrical capacitor" (see remarks page 16 – page 21). This argument is not persuasive.

Instant application specification does not disclose "an electric capacitor". However, instant application specification discloses, "The state unit comprises a capacitor or a unit 30 with an electrical capacitance", wherein the electrical capacitance 30 is charged up under the control of a switching event of FET. By using this **capacitor as the frequency control element of an oscillator** or PLL divider (**emphasis added**), which serves as the clock for the circuit element, i.e., the crypto-processor or crypto-

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coprocessor, the coupling with the operating speed can be achieved simply"; "the state unit is a unit with a thermal capacitance and the state is a temperature of the unit" and "Since the clock generated by the clock generator or its frequency directly influences the speed of execution of an operation by the computation unit" (Attention: see instant specification pages 5, 8 and 9 for details).

Examiner now points out that the admitted prior art Curiger, in fact, discloses, "the state unit includes an electric capacitor; and wherein the state is a charge state of the electrical capacitor"; "As the temperature increases, the oscillator will slow down and the increased temperature decreases the oscillator speed" and "the control of frequency provides a clock signal to the encryption related circuitry" (See Curiger Column 4 line 15 – Column 5 line 55). Furthermore, Curiger discloses that the oscillator provides timing and clock signals to the encryption calculation circuitry at the same time the oscillation circuit is not available to an attacker or pirate for adjustments.

Therefore, the examiner respectfully asserts that the cited prior art does teach or suggest the subject matter broadly recited in amended and new independent claims. The dependent claims are rejected at least by virtue of their dependency on the dependent claims. Accordingly, the rejection for the pending claims is respectfully maintained.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

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from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1 – 6 and 10 – 26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 11 of U.S. Patent No. 6,999,333. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is fully disclosed in the patent and in the instant case all the elements of Claims 1 – 6 and 10 – 26 correspond to Claims 1 – 11 of U.S. Patent Number 6,999,333, except in the instant claims the elements “a computation unit for executing an operation at a speed” and “a state unit, which has a state, wherein the speed of the computation unit is controllable according to the state of the state unit, wherein the state unit is designed to cause an increase of a variable by which the state of the state unit can be represented each time an operation is executed by the computation unit in response to the increase of the variable due to executing of the operation”, are referred in the patent claims as “a control device, which reads an electrical characteristic quantity from at least one one-time programmable cell” and “an assessment device

which is connected to the control device, and which compares the electrical characteristic quality with at least a first threshold value and a second threshold value and emits a comparison result indicating an uncertain programming state". It would have been obvious to one having ordinary skill in the art to recognize that controlling the speed of the computation unit is equivalent to indicating an uncertain programming state.

Claims of the instant application are anticipated by patent claims in that the patent claims contains all the limitations of the instant application. Claims of the instant application therefore is not patentably distinct from the earlier patent claims and as such are unpatentable for obvious-type double patenting (*In re Goodman (CAFC) 29 USPQ2d 2010 (12/3/1993)*).

### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1 – 6 and 10 – 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Curiger et al. (U.S. Patent Number 6,330,668).

**As per Claims 1, 13, 20, 22 – 26, Curiger** teaches, "a computation unit for executing an operation at a speed; and a state unit, which has a state, wherein the speed of the computation unit is controllable according to the state of the state unit,



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wherein the state unit is designed to cause an increase of a variable by which the state of the state unit can be represented in response to an execution of an operation by the computation unit, and to decrease the speed of the computation unit in response to the increase of the variable due to executing of the operation wherein the state unit includes an electrical capacitor; and wherein the state is a charge state of the electrical capacitor" (Column 4 line 15 – Column 5 line 55).

**As per Claims 14, 15 and 21, Curiger teaches,** "a computation unit for executing an operation at a speed; and a state unit, which has a state, wherein the speed of the computation unit is controllable according to the state of the state unit, wherein the state unit is designed to cause an increase of a variable by which the state of the state unit can be represented in response to an execution of an operation by the computation unit, and to decrease the speed of the computation unit in response to the increase of the variable due to executing of the operation; and

a clock generator; wherein the state unit includes a thermal capacitance; and wherein the state comprises a temperature sensor; wherein the clock generator is adapted such that an output signal of the temperature sensor controls a clock rate generated by the clock generator; and wherein the clock generator controls the speed of the computation unit" (Column 4 line 15 – Column 5 line 55).

**As per Claim 2, Curiger teaches,** "wherein the state unit has continuous states" (Column 4 lines 4 – 14).

**As per Claim 3, Curiger** teaches, "wherein the state unit is so designed that the state of the state unit is also a function of time" (Column 4 lines 15 – 30).

**As per Claim 4, Curiger** teaches, "wherein the state unit is so designed that, when the computation unit performs no operations, the state of the state unit changes in a direction which is opposite to the direction of change in response to execution of an operation" (Column 4 lines 15 – 30 and Column 5 lines 37 – 55).

**As per Claim 5, Curiger** teaches, "wherein the state unit is so designed that the speed of the computation unit is inversely proportional to the variable, by which the state of the state unit can be represented" (Column 4 lines 15 – 30 and Column 5 lines 37 – 55).

**As per Claim 6, Curiger** teaches, "wherein the state unit is so designed that the speed of the computation unit is inversely exponential to the variable, by which the state of the state unit can be represented" (Column 4 lines 15 – 30 and Column 5 lines 37 – 55).

**As per Claim 10, Curiger** teaches, "wherein a frequency of a clock rate of the computation unit can be controlled according to the state of the state unit" (Column 4 lines 15 – 30).

**As per Claim 11, Curiger** teaches, "wherein a number of bits which are processed by an operation in the computation unit can be controlled according to the state of the state unit" (Column 4 lines 15 – 30 and Column 5 lines 37 – 55).

**As per Claim 12, Curiger** teaches, "wherein the operation is a cryptographic operation for encrypting or decrypting information" (Column 4 lines 15 – 30 and Column 5 lines 37 – 55).

**As per Claim 16 – 19, Curiger** teaches, "wherein the first temperature sensor and the second temperature sensor are located at two places of the computation unit which warm up to different extents or at different rates on execution of an operation by the computation unit and a reduction of the speed of the computation unit" (Column 4 lines 15 – 30 and Column 5 lines 37 – 55).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pramila Parthasarathy whose telephone number is 571-272-3866. The examiner can normally be reached on 8:00a.m. To 5:00p.m.. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on 571-232-4195. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR only. For more information about the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pramila Parthasarathy

May 03, 2006.

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5, 7, 07